

Presented to the Library of the
S. G. O. by the Author
Falls (M.S.) M. S. Falls M.D.
1200 - 18th Street
Washington D.C.

WHOOPING-COUGH AS A CAUSE OF DEAF-
NESS.

By M. S. FALLS, M.D.,

ASSISTANT TO DR. BURNETT'S EYE AND EAR CLINIC, CENTRAL DISPENSARY, WASHINGTON,
D. C.



FROM a careful examination into the predisposing and exciting causes of deafness, I was much impressed with the scant mention made of whooping-cough as an etiological factor. While our text-books and journals are very prolific in assigning the exanthemata, diseases of the larynx, and even gastritis as agents of causation, whooping-cough, beyond the few authorities given below, is entirely ignored.

I consider pertussis as probably not a rare cause, but in dispensary practice, from which most of the cases have been taken, the time given to each case for examination is so extremely limited, that the history elicited is, as a rule, imperfect, and inadequate to our wants.

Wilde, on "Diseases of the Ear," Phil., 1853, p. 495, cites five cases in which the deaf-mutism was considered the result of whooping-cough. He further says in this connection: "In what way whooping-cough produces deafness, whether by local injury to the ear, such as occurs during a violent paroxysm rupturing the membrana, or from its effects on the nervous system, I am unable to say. Every one is aware of the many anomalous consequences which follow pertussis and popularly denominated 'the dregs of whooping-cough.'" Roosa, 6th ed., p. 685, reports in his statistics two cases in which deaf-mutism was assigned to pertussis. Peet, J. M., New York, 1856, pp. 53-56, tabulates twelve cases of deaf-mutism due to whooping-cough.

That rupture of the membrane can occur from violent paroxysms of coughing I do not doubt, for several cases are recorded in which the violent strain from the cough has been followed by cerebral effusion, with paralysis as a result. But in the cases coming under my observation, and that of Dr. Burnett, Director of the Ophthalmological and Otological Clinic of the Central Dispensary, the membrane was intact in all. That the deafness may be due to extension of inflammatory action from the throat I also admit; for when we consider the relative vascularity of the membrane in children and adults, we will find that the blood supply to the former is much greater, and that whooping-cough, although considered by some writers with diseases of the larynx and trachea, is not infrequently attended with hyperæmia of the Eustachian tube and tympanum.

But in the cases which I present for consideration, we would not be warranted in ascribing all of them to an inflammatory extension from the pharynx; rather let us look for some nervous implication, as the deafness was in the majority of cases absolute, since neither the vibrations of the fork nor the ticking of the watch could be heard when applied to the teeth or cranium, or when held close to the ear. In view of the above we think that the following cases taken from Dr. Burnett's clinic will not be without interest:

CASE I.—A. E., æt. eleven years. Admitted to the clinic at the Central Dispensary May 22, '85. The boy presented every evidence of scrofula, and had been treated for Pott's disease by Dr. S. W. Gross.

Twelve weeks ago, had pertussis attended with great straining. Two weeks ago hearing was suddenly lost, the deafness being absolute, commencing late in the evening, and, on the following morning, hearing in the left ear was lost. This was attended with some pain, but no discharge, vertigo, or vomiting. This pain persisted for two days, and then left the patient as suddenly as it began. *Mtt* intact, but slightly more concave than normal. Pyramid of light not visible to the periphery of the membrane in either ear. Put upon specific treatment. June 8th: Gives manifestations of tinnitus aurium. Complaining to his sister of "a

roaring" in his head. Since put upon specific treatment, some vomiting and nausea immediately after taking the medicine. Dose reduced one half. No improvement in hearing. Have seen the boy several times since, but so far no amelioration.

CASE 2.—S. B., æt four years. A mulatto boy, presenting every evidence of the scrofulous cachexia. On June 2, '85, when he was first admitted, his mother gave a history to the effect that, since March, he has had an attack of whooping-cough. Two or three weeks after the onset of the disease he suddenly became deaf (not absolute). Three weeks ago, discharge began in the right ear, none from the left. Complains of no pain. Loud voice at one foot, with either ear. Noticed unsteadiness of gait. *Mtt* slightly thickened and red. June 9th, less injection of membrana. Voice in either ear, one foot; probable increase of hearing after Politzer. June 9th, for two days pain in right ear. June 16th, gait normal; no pain; deafness persistent.

The following cases, of a similar character to the above, I report by the kindness of Dr. Burnett, from whose private case-book I copy the notes.

CASE 3.—M. J., white, æt thirteen years, had whooping-cough when about five years old. During convalescence, his parents noticed that his hearing power was defective. He became totally deaf within a year. No pain or discharge. *Mtt* normal.

It is of interest to note in connection with this case, and as bearing on the possible inherited tendency to deafness at a certain age, that a brother of the above had scarlet-fever at five years of age. No inflammatory affection of his ears, but his hearing gradually left him, and in twelve months he was completely deaf.

CASE 4.—H. S., white, æt. twelve, had suffered from impaired hearing, in right ear, as noticed by his parents since an attack of whooping-cough. Never any pain or discharge. L, W., fourteen feet; R, W., faintly on contact. *Mtt* normal; tubes pervious; no improvement after inflation.

The above cases occurred in Dr. Burnett's practice, in 1876.

The data furnished by these cases are not sufficient to

warrant any positive conclusion as to the causative relation between pertussis and deafness, or as to the manner in which the ear affection is brought about, but the existence of a connection between the two seems highly probable.

Cases 1, 3, and 4 would appear to be purely nervous in their character, while in case 2 there was a middle-ear complication, which, however, probably only served as a complication.

